

NR 445 Technical Advisory Group Meeting 7
Sept. 14, 2000 Notes
DNR Headquarters
G.E.F II, Room 027, Madison WI

TAG Attendance: Jim Beasom, Appleton Papers, Inc.; Jose Bucio, WI AFL-CIO; Dan Daggett, WI Bureau of Public Health; Robert Fassbender (for Pat Stevens), WMC; Dave Gardner, Briggs & Stratton Corp.; Hank Handzel, WPC & PIW; John Hausbeck, Madison Public Health; Howard Hofmeister, Bemis Company; Susan Mudd, Citizens for a Better Environment; Anne Neudorfer, WI Cast Metals Assoc.; Tom Ravn, Serigraph, Inc.; Annabeth Reitter, StoraEnso (formerly Consolidated Papers, Inc); Sharon Schwab (replacement for Marian Ruelle, League of Women Voters of the Wisconsin Rapids Area); Rudy Salcedo, City of Milwaukee Health; Rob Sherman, Kraft Foods; Mark Steinberg (for Ty Stocksdales), SC Johnson; Caryl Terrell, Sierra Club; Eric Uram, Sierra Club; Liz Wessel, Wisconsin's Environmental Decade; Caroline Garber, WDNR; Jeff Myers, WDNR; John Roth, WDNR; Andrew Stewart, WDNR
Committee Attendance: Myron Hafele, Kohler Co.; Robert Heitzer; Kathleen Standen, Wisconsin Electric; Jill Stevens, Alliant Energy; Xiaochun Zhang, WDNR

Morning Session:

I. Welcome/Introductions/Agenda Review

Caroline Garber, Environmental Studies Section Chief

- Welcome
 - Caroline Garber welcomed TAG and Toxics Committee members.
- Review of Meeting Notes
 - TAG members offered corrections and comments on the August 3, 2000 minutes. They have been addressed in the revised meeting notes.
- Review of Meeting Agenda
 - C. Garber reviewed the agenda and asked for comments.
 - *Comment* - B. Fassbender suggested that the issues of Wood Dust and Coal Dust be addressed by establishing a workgroup (similar to what is being proposed to be done with silica).
 - *Comment* - S. Schwab asked that the TAG cover the current status of the NR 445 proposal as it pertains to the issue of non-carcinogens with TLVs > 99 ppm and her concern about methanol.

II. Old Business

- Level 2 Modeling for Compliance Demonstration. J. Roth presented a memo documenting the latest recommendations for use of modeling to demonstrate compliance (see handout which is a memo from John Roth to Caroline Garber dated September 11, 2000 and titled: "Wisconsin DNR Hazardous Air Pollutant Screening Levels"). Level 2 is the use of the EPA SCREEN model.
 - *Comment* - C. Terrell suggested that there be a tracking system to document source's use of these modeling exercises to demonstrate compliance.
 - *Comment* - B. Fassbender had a concern that sources that modeled at 90%, but less than 100% of AAC would have to go back to DNR at a lot of different junctures. He would like to use 100% instead of 90%.
 - *Response* - J. Roth explained that the 90% factor was to make sure that sources that were close to the standard did not have errors in the input to the models that could violate the standard. In other words, the 90% factor is a safeguard.
 - *Response* - A. Stewart added that if we used 100%, some sources might be at risk of non-compliance because they don't have the expertise in modeling needed to properly decide between the many possible options needed to run dispersion models.
 - *Comment* - H. Hofmeister stated that this Level 2 option is a compromise, but that the 90% factor is not necessary.

- *Response* - C. Garber explained that the use of the 90% factor can be monitored and if we find out that it is not necessary, we can drop it at a later date.
 - *Comment* - R. Salcedo had a comment on the first paragraph of the modeling memo. He wanted to make sure it was clear that compliance was demonstrated one facility at a time (it does not take into account other facilities nearby or background levels of a hazardous air contaminant).
 - *Qu.* - C. Terrell asked how this guidance would end up...(in rule or guidance?).
 - *Response* - A. Stewart responded that DNR hasn't decided how much of this modeling demonstration process would be in rule vs. guidance.
 - *Comment* - B. Fassbender commented that he thought it should be in the rule.
 - *Qu.* - H. Hofmeister asked whether the rule or guidance should be in NR 445 or in NR 406 (permits).
 - *Response* - A. Stewart stated that the purpose is to have a streamlined compliance process in NR 445, but that some language in NR 406 (permits) may also be appropriate.
 - *Comment* - H. Hofmeister suggested that this streamlined compliance option be used for Table 3 chemicals also.
 - *Comment* - B. Fassbender added that whether the issue is applicability or compliance, it needs to be addressed.
 - *Response* - A. Stewart responded that in his opinion, this issue is one of compliance.
- Table 3 Compliance Option of showing "all" sources at a facility have a combined cancer risk of 10-5 or less. The purpose of this topic is to clearly convey the intent of what types of sources should be included in this compliance demonstration option (see handout titled: "Affected Sources-Draft List for Discussion Purposes"). The list of sources was not meant to be all-inclusive, but only "illustrative".
 - *Qu.* - A. Neudorfer asked if are going to eliminate the indoor air fugitive exemption?
 - *Response* - C. Garber stated that DNR would be reviewing the status of the indoor fugitive exemption.
 - *Comment* - M. Steinberg suggested that we look at "insignificant" sources as listed in Title V guidance.
 - *Qu.* - T. Ravn asked if we include NR 445 exempt sources for this Table 3 compliance option, are those sources now subject to BACT or LAER.
 - *Response* - A. Stewart responded that the compliance option does not require BACT or LAER to be placed on an exempt source.
 - *Comment* - L. Wessel said that there was concern about the more egregious toxics that might be emitted using this compliance option, if the more toxic compounds (or more persistent and more able to bioaccumulate) were harder to control, while those that are less toxic were easier to control.
 - *Comment* - J. Myers stated that DNR would also be using this compliance option using the maximum exposed individual to calculate the 10-5 risk.
 - *Comment* - B. Fassbender stated that this option is still too conservative.
 - *Comment* - A. Neudorfer suggested adding gravel roads to list of insignificant sources
 - *Comment* - M. Steinberg suggested adding backup generators to list of insignificant sources
 - *Comment* - H. Hofmeister said there were many other scenarios such as the use of a commercial or consumer product (in an enclosure or where there is a stack).
 - *Qu.* - J. Beasom asked how one could model these emissions.
 - *Comment* - T. Ravn stated that you have such low emission rates that you can't test to see if a contaminant is present.
 - *Qu.* - M. Steinberg asked that DNR consider adding emissions from laboratories to the list of insignificant sources.

Follow up: Please let Andy Stewart know if you have any other suggestions or comments on this issue.

- Quantification of Emissions at Very Low Levels. A. Stewart reported to the TAG that air staff have met with water program staff to better understand their approaches to these issues. Some of the guidance we are considering are:
 - What process to follow if there is no accepted/ adequate test method?
 - What process to follow if one can detect a contaminant but one can't quantify it?
 - Alternate ways to set compliance levels in permits when quantification problems exist.
 - *Qu.* - T. Ravn asked how the 10-lb/year default threshold for carcinogens without potency factors was chosen.
 - *Ans.* - J. Myers explained that 10 lb/year represents the statistical median (50th percentile) of all potency factors of carcinogens for which there is potency information from US EPA or the State of California.
 - *Discussion* - TAG members discussed what constituted BACT or LAER. The main point of the discussion is that BACT or LAER does not necessarily mean the use of control equipment. It can also mean work practices and material or process changes.
 - *Discussion* - TAG members discussed the issue of Material Safety Data Sheets (MSDS) sheets. By OSHA regulations, suppliers of MSDS sheets have to report hazardous ingredients in amounts greater than 1% by weight. For carcinogens, amounts greater than 0.1% must be reported. The discussion centered on whether additional testing of materials used in a facility must be done. For most situations, the user of the chemical is not expected to test each and every product that they use. However, if there is reason to believe contaminants are in a product that are not reported in an MSDS and the amount of use of the product are potentially high enough to exceed a threshold, then the material should be tested. It is ultimately a facility's responsibility not to exceed Ambient Air Concentrations (AACs) and to comply with the technology based standards (BACT and LAER) for carcinogens.
 - *Comment* - H. Handzel stated that neither the Paper Council nor the Printing Industries of Wisconsin necessarily agrees with the 10-lb/year default.
- Compliance Schedule for NR 445 and NR 438, including integration with permit and inventory processes. C. Garber and A. Stewart presented a proposal on the issue of compliance timing. The current rule typically allowed sources up to 2 years to comply with the rules, with additional 6-month extensions available. In addition, there was an opportunity to obtain an extension up to 1 year, if control equipment is needed. Also brought up was the fact there is a 3 year compliance date used in the Clean Air Act's MACT standards under s. 112(d).
 - *Comment* - M. Steinberg suggested that more points be added to the examples of certification statements that are acceptable.
 - *Response* - A. Stewart replied that this handout is illustrative and not all-inclusive at this time. The intent was to give a sense of the timing issues that may need to be addressed. Some facilities may only need to perform calculations while others might need to reformulate processes, change materials or install control equipment. The DNR would like input from stakeholders on what is reasonable in terms of compliance times.
 - *Qu.* - A question was asked about what things a source must do within 3 years, submit a plan for what it will do, or be in compliance. (The answer is those are the issues we want input from the TAG members on). There was discussion about whether a different and better process could be used for compliance determinations, such as having sources submit compliance certifications, or leaving their certifications on site (if they had no significant toxicity issues that needed further review – i.e., they were below all applicable thresholds). It was also discussed that there were problems in the original NR 445 when facilities submitted compliance plans, some of which have not been reviewed.
 - *Comment* - B. Fassbender commented that there are no easy answers here. There are hundreds of chemicals which are dropping to low thresholds. There will be many more companies than are regulated now. These new sources will have to develop inventories and compliance plans. These factors argue for more extended timeframes.

- *Comment* - C. Terrell stated that for sources already holding permits, the additional time is not needed.
- *Qu.* - B. Fassbender asked if there was the ability of sources to receive an application shield
- *Qu.* - Jim Beasom asked if sources would have to submit testing and analysis plans on these new chemicals.
- *Response* - A. Stewart stated that it is not required for inventory purposes. For compliance purposes, you can send in such plans, but they are not required.
- *Comment* - C. Terrell thought that higher priority for review by DNR are those facilities that need a BACT/LAER review.
- *Comment* - M. Steinberg thought that it was a matter of staff resources as well. It is a function of the number of additional permits and the DNR staff resources available.
- *Qu.* - S. Mudd asked if any other types of sources should be a priority for review. She also mentioned that from her experience with NR 445 previously, the planning phase of the rule did not result in major changes; she believed compliance should be complete at the end of the 3 years (not just have a plan submitted).
- *Comment* - A. Reitter suggested that DNR have a timeline for agency action with regard to compliance dates.
- *Discussion* - TAG members discussed in more detail on what exactly was meant by a permit or application shield.
- *Comment* - H. Handzel reminded the TAG that Table 3 contaminants need a great deal of “give and take” on issues such as what constitutes BACT or LAER and this may be a different scenario than that of contaminants on Tables 1,2,4, or 5.
- *Qu.* - J. Beasom asked what happens if a threshold for a contaminant is lowered, but the emission point already has BACT or LAER applied to it.
- *Response* - A. Stewart responded that the rule will not make people go back to review what was BACT or LAER for that emissions point.
- *Qu.* - A. Neudorfer asked if the DNR would ever supply facilities with a cut-off in terms of dollars per ton to more clearly define when control costs are unreasonable.
- *Response* - A. Stewart replied that there are so many variables involved with each case-by-case definition that it would be impossible to give someone a “hard and fast” rule.
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- TLVs > 99 ppm. Caroline Garber described the current status of the DNR proposal for chemicals with TLVs >99 ppm. Basically, these chemicals will not be listed as hazardous air contaminants in the rule itself, but we will seek language in the proposed rule to be able to track the emissions and set limits in permits of these contaminants, if a source emits more than an amount that could cause an impact greater than 2.4% of the TLV.
 - *Qu.* - S. Schwab noted that methanol was a chemical with a TLV >99 ppm. She asked the paper mill representatives what would happen to methanol emissions as a result of changes due to upcoming MACT rules.
 - *Response* - A. Reitter said that, in the general sense, the MACT would affect each mill differently. She also added that their facility (StoraEnso) already meets the MACT requirements, so no additional major reductions of methanol were anticipated at this time.

III. Screening Level Analysis of Fossil Fuel Exemption (for coal combustion)

- A. Stewart presented an analysis of the current fossil fuel exemption as it pertains to coal combustion (see handouts titled: “Virgin Fossil Fuel Exemption”, “Evaluation of Emissions from Coal Combustion –...”, and an Excel Spreadsheet titled “Sources Considered in the Evaluation From Coal Combustion”). The analysis looked at metal emissions (Arsenic, Beryllium, Cadmium, Chromium, Manganese, Mercury, Nickel and Selenium), and non-metals (Acrolein, Hydrogen chloride, and Hydrogen fluoride). The analysis was done by examining 87 coal fired boilers at 27 different facilities and used a generic stack height modeling approach (17 different types of stacks in each of 5 different meteorological regions of WI) to screen hazardous air contaminants that could present a health problem (either carcinogens or non-carcinogens). The main findings of the analysis were:

- Sources of acute and chronic compounds emit at a fraction of the level that would be allowed under their respective AAC levels
- Sources of carcinogens above threshold levels emit at a rate resulting in an impact less than 10 –5 and/or are exhausted through high efficiency particulate matter control devices that would be considered BACT or LAER.
- The current exemptions for coal combustion seem to be reasonable. Therefore, removing this exemption wouldn't reduce the risk or decrease the level of emissions.
- *Qu.* - E. Uram asked how facilities calculate the emissions that are reported in emissions inventories.
- *Response* - A. Stewart replied that emissions are calculated based on testing of coal, stack tests, emission factors and engineering calculations.
- *Comment* - E. Uram stated that the emission factors could vary widely. For mercury in bituminous coal, there is a range of emission factors that are five orders of magnitude. He also said he felt there is a lot of difference between what is reported vs. what is emitted.
- *Qu.* - C. Terrell asked for a graph showing the cumulative risk range from each facility for all toxics rather than the slide that A. Stewart presented showing how each individual contaminant varies in terms of risk impacts.
- *Response* - C. Garber and A. Stewart agreed to provide this graph at a later date.
- *Qu.* - A question was asked as to whether this analysis was for inhalation risk only and if it considers hazardous air contaminants that are persistent, bioaccumulative and toxic.
- *Ans.* - Only inhalation was considered. The Department is aware of this concern, but this is not a subject of the scope of this rule revision at this time. There are other Department efforts underway in this area however.
- *Comment* - E. Uram mentioned that the metals don't break down in the environment and could build up into higher concentrations over time.

IV. Initial Outline of Revised Chapter NR 445

- A. Stewart presented an outline of the rule language sections of NR 445 and what types of rule language changes are being contemplated at this time (see handout titled: "Draft" with file name "Draft rule outline.doc" in lower left corner).
 - *Comment* - M. Steinberg suggested that the titles for the standards reflect when a standard is an ambient air concentration and when it is a technology based standard such as BACT or LAER (perhaps have 2 columns instead of 1?).
 - *Comment* - D. Daggett suggested that DHFS be included in the rule under variance procedures for LAER. The rule does not currently state that DHFS must be consulted when a source requests a variance, but the rule states in NR 445.04(7) (New/Modified Sources) and 445.05(8) (Existing Sources), that in order to obtain a variance, there must be a showing that public health must be protected. In recent months there have been several permits involving variances where DHFS felt it would be better if they were involved in the beginning of the variance process rather than having citizens request their participation during the permit hearings for these facilities.
 - *Comment* - C. Terrell, S. Mudd and E. Uram said DHFS has a role in this determination.
 - *Qu.* - S. Schwab asked TAG members if they could supply any health studies on hazardous air contaminants that they were aware of and that the DNR may not already have.
 - *Qu.* - E. Uram asked about the NR 445 language that pertains to spills and if that language could require a facility to shut down if there was an air spill.
 - *Ans.* - Emergency shutdown provisions are not in NR 445. Other statutes and Department rules (e.g., NR 706) already cover these types of situations.
 - *Qu.* - S. Mudd asked if chemicals on the watchlist would be mentioned in NR 445.
 - *Ans.* - A. Stewart responded that the watchlist chemicals would not be listed in NR 445.
 - *Response* - A. Stewart stated that Silica would be the subject of a special study (similar to original NR 445 special studies for formaldehyde and chloroform).

- *Response* - C. Garber stated that staff are currently looking at the current exemption for diesel emissions (they are a type 1 virgin fossil fuel) and we will report back to the TAG on our analysis at a future date.

V. Proposed Process for Regular Updates to NR 445

- J. Myers presented a process for ensuring regular updates for the rule to reflect recent scientific information (see handout titled: "Proposal for Regular Updates for Ch. NR 445, Wis. Admin. Code"). In addition, he presented two handouts describing the decision rules that have been developed to decide which chemicals are listed in NR 445 (see memo from Jeff Myers to file, dated September 12, 2000 titled: NR 445 Decision Criteria for Listing Chemicals" and handout titled: "Decision Rules for Listing Chemicals").
 - *Qu* - S. Mudd asked if the regular updating of the rule would increase the permit workload and how the Department might address a potential large number of backlogged permits.
 - *Ans.* - A. Stewart stated that the future revisions would be incorporated into permits, as each permit was required to be updated as part of an envisioned 5-year renewal process.
 - *Comment* - B. Fassbender said that WMC does not agree with the whole idea of referring to a third party for listing hazardous air contaminants.
 - *Comment* - C. Garber said that the decision rules being developed during the current revision would be applied in the biennial process.

VI. Updates to HAP Tables Based on Most Recent Publications

- J. Myers presented an overview of the most recent additions (see handout titled: Recent Additions to NR 445 Proposal) as well as lists of chemicals that are proposed for addition to NR 445 based on the 2000 TLV book (see memo from Jeff Myers to file, dated September 12, 2000 titled: "Chemicals With "Adopted" Changes in the 2000 TLV Book, published by the ACGIH) and carcinogenic chemicals that are proposed for addition to Table 3 (see memo from Jeff Myers to file, dated September 13, 2000 titled: "NR 445 Table 3: Carcinogens Changes/Additions as a Result of the Publication of the National Toxicology Program's 9th Report on Carcinogens and IARC Publications").
- J. Myers also presented the latest version of the Excel spreadsheet showing the proposed listings for all NR 445 chemicals. This spreadsheet reflects the most recent additions as mentioned above (see handout (landscape format on legal sized paper - 14 pages) titled: "Draft Working List: September 2000 NR 445 Chemical List").
 - *Qu.* - J. Stevens asked whether wood and coal dust would be treated like silica in the rule revision and suggested that the department take a look at other air regulations, e.g., NR 415, to see if they were adequate to address the concern.
 - *Ans.* - A. Stewart agreed to take a look at NR 415.
 - *Qu.* - J. Beasom asked about the listing of asphalt fumes.
 - *Ans.* - J. Myers explained in more detail about the listing and acknowledged that there were a number of issues that needed to be looked at, e.g., how would a source be defined.
 - *Qu.* - S. Mudd asked whether there would be compliance requirements for silica if it were listed in Table 1.
 - *Ans.* - C. Garber replied that staff would like to deal more holistically with the silica issues.
 - *Qu.* - S. Mudd asked if compliance requirements for silica would be delayed if it were dealt with in a study group.
 - *Ans.* - C. Garber replied yes, that the work group would be expected to develop compliance recommendations.

- *Qu-* B. Fassbender asked whether flour dust was included in the proposed list of chemicals.
- *Ans.-*J. Myers answered yes, that flour dust met the decision criteria proposed for listing chemicals in NR 445.
- *Comment-* A. Neudorfer made the point that acid mist were present at greater than 35% concentrate in exhaust gases from scrubbers.

VII. Other Issues

- B. Fassbender suggested that Wood Dust and Coal Dust be evaluated using separate workgroups (similar to the workgroup approach being proposed for silica).
- C.Garber indicated that listening sessions on silica would be set up with environmental and public health groups. Following these sessions a charge for a silica workgroup will be developed and brought back to the TAG for input.

VIII. Next Meeting

- The next meeting date was set for Tuesday, November 14, 2000 from 10 a.m. to 3 p.m., with a location yet to be determined (trying to find a location in either Stevens Point or Wisconsin Rapids).

Notes prepared by: Jeff Myers, Andrew Stewart, and Caroline Garber, Bureau of Air Management

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